

**Appl. No.** : 10/644,634  
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IN THE CLAIMS:

Please amend the claims as follows:

1. (previously presented): A method of forming stabilized microbubbles for in vivo use, comprising the steps of:  
providing a first gas, a second gas comprising a perfluorocarbon, a membrane forming material, and a liquid, wherein said first gas and said second gas are present in a molar ratio of about 1:100 to about 1,000:1, and wherein said second gas is a gas at 37.degree. C. and 760 mm Hg with the proviso that said first gas and said second gas are not water vapor; and surrounding said first gas and said second gas with said membrane forming material to form stabilized microbubbles in said liquid.
2. (previously presented) The method of claim 1, wherein the membrane forming material comprises at least one surfactant.
3. (previously presented) The method of claim 1, wherein the membrane forming material comprises a protein.
4. (previously presented) The method of claim 1 wherein the second gas is a gas osmotic agent.
5. (previously presented) The method of claim 1 wherein the first gas is a modifier gas.
6. (previously presented) The method of claim 4 wherein the second gas is selected from the group consisting of perfluoropropane, perfluorobutane, perfluorocyclobutane, perfluoromethylcyclobutane, perfluoropentane, perfluorocyclopentane, perfluoromethylcyclopentane, perfluorodimethylcyclobutanes, perfluorohexane, perfluorocyclohexane, perfluoroheptane, perfluorocycloheptane,

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perfluoromethylcyclohexane, perfluorodimethylcyclopentane,  
perfluorotrimethylcyclobutane, and perfluorotriethylamine.

7. (previously presented) The method of claim 1 wherein the first gas is selected from the group consisting of nitrogen, oxygen, carbon dioxide, air and mixtures thereof.
8. (previously presented) The method of claim 1 wherein the liquid is water.
9. (previously presented) The method of claim 1 wherein the microbubbles are osmotically stabilized after being injected in vivo.
10. (previously presented) The method of claim 3 wherein the protein is albumin.
11. (previously presented) The method of claim 1 wherein the second gas is perfluorohexane and the modifier first gas is nitrogen.
12. (previously presented) The method of claim 1 wherein the molar ratio of said first gas to said second gas is 1:100 to 100:1.
13. (previously presented) The method of claim 1 wherein the stabilized microbubble is used for diagnostic imaging.
14. (previously presented) A composition comprising stabilized microbubbles for in vivo use, comprising:

a first gas, a second gas comprising a perfluorocarbon, a membrane forming material, and a liquid, wherein said first gas and said second gas are present in a molar ratio of about 1:100 to about 1,000:1, and wherein said second gas is a gas at 37 degrees C. and 760 mm Hg with the

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proviso that said first gas and said second gas are not water vapor; and

said first gas and said second gas are surrounded with said membrane forming material to form stabilized microbubbles in said liquid.

15. (previously presented) The composition of claim 14 wherein the membrane forming material comprises at least one surfactant.
16. (currently amended) The ~~method~~ composition of claim 14 wherein the second gas is selected from the group consisting of perfluoropropane, perfluorobutane, perfluorocyclobutane, perfluoromethylcyclobutane, perfluoropentane, perfluorocyclopentane, perfluoromethylcyclopentane, perfluorodimethylcyclobutanes, perfluorohexane, perfluorocyclohexane, perfluoroheptane, perfluorocycloheptane, perfluoromethylcyclohexane, perfluorodimethylcyclopentane, perfluorotrimethylcyclobutane, and perfluorotriethylamine.
17. (previously presented) The composition of claim 14 wherein the first gas is selected from the group consisting of nitrogen, oxygen, carbon dioxide, air and mixtures thereof.
18. (previously presented) The composition of claim 14 wherein the membrane forming material is selected from the group consisting of albumin, phospholipid and polysaccharides.
19. (previously presented) The composition of claim 14 wherein the second gas is perfluorohexane and the first gas is nitrogen.
20. (previously presented) The composition of claim 14 wherein the second gas is perfluoropropane and the first gas is nitrogen.